

PATENT  
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## NEUROSTIMULATION THERAPY MANIPULATION

[0001] This application claims priority from U.S. Provisional Application Serial No. 60/422,260, filed October 31, 2002, and U.S. Provisional Application Serial No. 60/503,214, filed September 15, 2003. The entire content of both Provisional Applications is incorporated herein by reference.

### TECHNICAL FIELD

[0002] The invention relates to neurostimulation therapy and, more particularly, to manipulation of neurostimulation parameters.

### BACKGROUND

[0003] An implantable medical device may be used to generate electrical stimulation, and deliver the stimulation to the nervous system of a patient, i.e., to deliver neurostimulation therapy to the patient. Implantable medical devices are used to deliver neurostimulation therapy to patients to treat a variety of symptoms or conditions such as chronic pain, tremor, Parkinson's disease, epilepsy, incontinence, or gastroparesis. Typically, implantable medical devices deliver neurostimulation therapy in the form of electrical pulses via leads that include electrodes. To treat the above-identified symptoms or conditions, for example, the electrodes may be located proximate to the spinal cord, pelvic nerves, or stomach, or within the brain of a patient.

[0004] A clinician may select values for a number of programmable parameters in order to define the neurostimulation therapy to be delivered to a patient. For example, the clinician may select an amplitude, which may be a current or voltage amplitude, and pulse width for a stimulation waveform to be delivered to the patient, as well as a rate at which the pulses are to be delivered to the patient. The clinician may also select as parameters particular electrodes within an electrode set to be used to deliver the pulses, e.g., a combination of electrodes from the electrode set.

[0005] One existing programming technique used for programming spinal cord stimulation (SCS) therapy involves fixing pulse rate and width, testing a long list of electrode combinations, and asking the patient to optimize the amplitude for each. One or more